

cially helpful in the diagnosis and management of patients with Crohn's disease. It is also useful in showing the presence of small bowel neoplasm like carcinoid and in showing there to be a Meckel's diverticulum.

The success of this technique is greatly dependent on the enthusiasm of the physician toward gastrointestinal radiology and his skill as a fluoroscopist. The routine use of this technique is a new approach for examining the small bowel and the results have been excellent in centers where it has been used. Although routine use of this technique may not be practical in the United States, use in selected patients will produce gratifying results and accurate diagnosis.

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Gray Scale Ultrasonographic Differentiation of Medical and Surgical Jaundice

THE RECENT technological advances in ultrasound instrumentation including gray scale signal processing and focused transducers have led to the improved visualization of many normal structures in the high retroperitoneum and liver. Most of the important upper abdominal vasculature, all or part of the glandular elements of the pancreas, and portions of the normal biliary system can be seen in a high percentage of patients using the newer scanning techniques and commercially

available instrumentation. An immediate benefit from this improved resolution has been the accurate differentiation between surgical and medical jaundice. Although considerable experience is required to distinguish the dilated intrahepatic or extrahepatic biliary system from the upper abdominal vasculature, once learned, the differentiation between obstructive and nonobstructive jaundice can be made with greater than 95 percent accuracy. Rarely, extreme gassiness in the upper abdomen, an interposed right colon or residual barium will prevent the ultrasound examination from being diagnostic.

On the basis of these initial reports, a new diagnostic sequence has been adopted for jaundiced patients. If the degree of bilirubinemia precludes conventional oral or intravenous cholangiography, then gray scale ultrasound is the initial imaging procedure. If a normal or nondilated biliary system is shown by the ultrasound examination, then either clinical observation is instituted or a biopsy study of the liver done. When gray scale ultrasound examination shows a dilated biliary system, then the clinician has the option of either obtaining further specific diagnostic information by outlining the biliary tree with transhepatic or transjugular cholangiography or going directly to surgical exploration.

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